

REMARKS

I. Introduction

In response to the Office Action dated September 17, 2003, claims 1-23 have been cancelled, claims 24-40 have been added. Claims 24-40 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Prior Art Rejections

In paragraphs (3)-(4) of the Office Action, claims 1-3, 5, 9-13, 15, and 19-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Kubota et al., JP 63-131270 (Kubota). In paragraphs (18)-(19) of the Office Action, claims 4, 6, 8, 14, 16, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kubota as applied to claim 1. In paragraph (26) of the Office Action, claims 7 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kubota as applied to claim 1, and further in view of Neville et al., U.S. Patent No. 5,803,629, Ellson et al., U.S. Patent No. 5,805,783 (Ellson), and Feld et al., U.S. 2001/0026272 (Feld). In paragraph (29) of the Office Action, claims 22 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kubota as applied to claim 1, and further in view of Ellson.

Specifically, claim 1 was rejected as follows:

As per claim 1, Kubota et al., hereinafter Kubota, discloses an apparatus for generating three-dimensional text within images composited in real time, comprising means for generating said three-dimensional text from one or a plurality of text formatting templates, including processing means and storage means (Figure 1), wherein

said storage means stores said text formatting templates and instructions for said processing means (Figure 1 1 "two-dimensional character font memory device (1) that stores two-dimensional character fonts for multiple characters", page 4, line 15-16 and "Any type of device that allows input of the character string for composition can be used as character string input device (2). In this application example, a word processor is used", page 4 last 2 lines of Translation, since a character string can be formed at 3, the three-dimensional character font forming device, whatever contains the character string can be considered as a template);

said instructions configure said processing means to perform the steps of:

defining one of said text formatting templates as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1)", page 5 line 4-6 of Translation and Figure 3 shows the templates with Cartesian co-ordinates within a three-dimensional space);

equipping said defining text formatting template with three-dimensional preferences with which to format text to be included in said template ("it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 7-8, where the prescribed depth is the three-dimensional preference);

equipping said defined text formatting template with said text ("all of the three-dimensional character fonts are formed by imparting depth d", page 6, line 13-14 of Translation); and

rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space (Figure 1 2 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

Applicant traverses the above rejections in view of the new claims provided herein.

New independent claims 24 and 32 are generally directed to displaying three-dimensional text in a live video broadcast. The claims also provide for creating the attributes of text such as its size, position, orientation, lighting and texture, etc. in advance before the actual text content is known. When the text content becomes known, it is possible to create it quickly either by directly typing it into the system, or by reading the text information from a live database.

To provide the above attributes, the claims provide for the generation of a live video signal. Text input is then received. Dependent claims 25 and 33 provide that the text input is received from a keyboard that is manually operated (i.e., the text is input directly into the system). Dependent claims 26 and 34 provide that the text input is received from a real-time database. A template that provides 3D preferences for the input text is then read. Thereafter, the input text is formatted in accordance with the 3D preferences to generate 3D text. The 3D text is then combined with the live video signal to produce a broadcast signal.

The cited references do not teach nor suggest these various elements of Applicant's independent claims.

Kubota merely describes composing three-dimensional characters from two-dimensional text (see page 4, lines 2-3). However, Kubota lacks any discussion about live video broadcasts and combining generated 3D text with a live video broadcast to produce a broadcast signal. In fact, Kubota completely fails to address video and/or broadcast information whatsoever.

In addition, Kubota fails to teach, disclose, or suggest the template of 3D preferences as claimed. The Office Action equates Kubota's three-dimensional character font forming device with the prior claim's template. Further, the Office Action equates the prescribed depth to the 3D preferences of the prior claims. However, as set forth in the current dependent claims, the 3D preferences may take a variety of forms such as a behavior that may take place as text is added (see claim 28, a rotation in 2D or 3D (see claim 29), a scaling factor, extrusion, texture, light source, or

combination of such preferences (see claim 30). Additionally, claim 31 provides that multiple templates (with each potentially having different 3D preferences) may be stored and used in the invention. As claimed, such 3D preferences are stored in the template and used to generate the 3D text.

However, in Kubota, such preferences are not stored in a template. Instead, the preferences must be individually input by a user. For example, individual commands must be used to perform such a rotation (see page 6, lines 13-15). Further, the preferences such as character style, color, etc. must be manually input by the user (see page 6, lines 20-21). Accordingly, Kubota falls well within the prior art as set forth in the present specification on page 2, paragraphs [0004] and [0005]:

[0004] Therefore, it can be said that three-dimensional characters generated according to the prior art require an editor to be aware of the contents of the image and/or broadcasts within which said three-dimensional text will be implemented, in order to accurately define, transform and render said three-dimensional text. According to said prior art, the contents of said graphical tiles always have to be known in advance of the filming of the video sequence, as every successive instantiation of said titles, corresponding to successively changing text contents, has to be designed and rendered in order to ensure that it conforms to position and size imperatives when overlayed onto each frame of the broadcast, thereby precluding live broadcast from benefiting from said three-dimensional text tiding effects.

[0005] The present invention overcomes this problem by providing a two-dimensional template defined within a three-dimensional space which formats text according to three-dimensional properties such that said text can be rendered as three-dimensional text in real-time.

Kubota's failure to satisfy the noted disadvantages of the prior art and advantages of the present invention provide further evidence of Kubota's failure to teach the invention as claimed.

In addition, the Office Action rejected prior claim 10 (which provided that the rendering step was performed in real-time) based on Kubota stating that since Kubota teaches the composition using a computer and "since there is no interruption to the process, the process is inherently performed in real time." Applicant disagrees with such an assertion in view of the new claims. Specifically, Kubota fails to address live video broadcasts which have inherent difficulties well beyond the issues addressed by Kubota. Further, performing a process without interruption is not even remotely similar to utilizing a live video signal and combining text in real time with the live video signal. Kubota does not even remotely refer to, explicitly or implicitly, the production of a composite 3D text character that has been produced/composited with live video in real time.

In addition to the above, the other cited references also fail to cure Kubota's deficiencies.

Moreover, the various elements of Applicant's claimed invention together provide operational advantages over Kubota, Neville, Ellson, and Feld. In addition, Applicant's invention solves problems not recognized by Kubota, Neville, Ellson, and Feld.

Thus, Applicant submits that independent claims 1, 11, 21, and 22 are allowable over Kubota, Neville, Ellson, and Feld. Further, dependent claims 2-10, 12-20, and 23 are submitted to be allowable over Kubota, Neville, Ellson, and Feld in the same manner, because they are dependent on independent claims 1, 11, 21, and 22, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-10, 12-20, and 23 recite additional novel elements not shown by Kubota, Neville, Ellson, and Feld.

III. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

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